REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1- 20 are pending in the present application. Claims 1, 2, 4, 5, 7-9, 12, 14, 16, 17, 19 and 20 are amended.

Claim amendments find support in the application in the claims as originally filed. Thus, no new matter is added.

In the outstanding Office Action, Claims 1, 4 and 7 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement; and Claims 1-20 are rejected under 5 U.S.C. §103(a) as unpatentable over Caron et al. (U.S. Pat. No. 6,083,282, herein "Caron") in view of Santhanam et al. (U.S. Pat. No. 6,247,174, herein "Santhanam").

In regard to the rejection under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement, Claims 1, 4 and 7 are amended to merge "first syntax analyzer" and "second syntax analyzer" into the originally claimed "syntax analyzer." All claimed limitations that were claimed as carried out by the "first syntax analyzer" are at least supported by the originally filed independent claim 1. Specifically, originally filed Claim 1 recited "a syntax analyzer which analyzes syntax of said tokens, and makes a judgment as to whether or not a definition of an intrinsics function and an instruction attribute information characterizing an instruction coded in intrinsics functions is included in a combination of said tokens."[1]

Additionally, all claimed limitations that were claimed as carried out by the "second syntax analyzer" are supported by the original specification at page 10, lines 25 to page 11, line 8 and page 14, lines 11-25.

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[1] In re Garner, 178 USPQ 149, 149 (C.C.P.A. 1973) stands for the proposition that original claims constitute disclosure for satisfying the written description requirement.

Further, the definition of the attribute information of the intrinsics (built-in) function, for example, can be specifically found in the passage stating, "The above-noted #pragma custom is a pre-processing instruction...In the first embodiment, various attributes of the intrinsics function are defined by using #pragma custom. In this description, the instruction length of the mov instruction is defined as being 2 bytes." Additionally, the runtime operation of attribute information processing by the syntax analyzer 12 of Fig. 2 can be found in the passage stating, "a check is made to determine whether the word "custom" follow immediately after "#pragma" (step S40)...In the case of "custom", however, "#pragma custom" processing is performed (step S42). A check is performed to determine whether or not the specific identifier (for example, mov) is stored in the symbol table as intrinsics function in the instructions information data base 18 (step S43)...In the case in which this identifier is stored in the symbol table as intrinsics function, interpretation of the specified attribute information is performed (step S45Z)...In the case in which a specified attribute (phrase such as 2byte) can be interpreted, attribute information is added to the intrinsics function information (step S47)." Further, the runtime operation of attribute information processing by the syntax analyzer 12 of Fig. 2 can be found in Fig 2 as well as Fig. 4.

In the outstanding Office Action, it is stated that Fig. 4 does not show an analyzer. However, the originally filed specification discloses that the processing in Fig. 4 is performed by the syntax analyzer 12 if certain conditions are met. The specification states, "Fig. 4 is a drawing showing the flow of attribute information processing by the intermediate code generator 13 of Fig. 1 (in the case of intermediate code generator provided) and the syntax analyzer 12 of Fig. 4 (in the case of no intermediate code generator provided)."[2]

Accordingly, Applicant respectfully requests that the rejection of 1, 4 and 7 under §112, first paragraph, be withdrawn.

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[2] Specification, page 14, line 11-13.

Addressing now the rejection of Claims 1-20 under 35 U.S.C. 103(a) as unpatentable over Caron in view of Santhanam, the rejection is traversed by the present response.

Specifically, the independent claims describe a complier system which enables a user to customize the intrinsics (built-in) function by adding definitions of intrinsics function from outside the compiler, either at start-up time or during processing of compiling source programs, where an instruction is not originally capable of being interpreted by a compiler but is capable of operating a processor.

Further, in the claimed compiler system, tokens divided from an input source program are analyzed by the syntax analyzer, and the syntax analyzer judges as to whether or not a definition of an intrinsics functions is included in a combination of said tokens. Then the syntax analyzer is used to find a reserved pre-processing instruction in the combination of said token and, if found, adds said instruction attribute information described in said pre-processing instruction to the definition of the intrinsics function in said database. As a result, all intrinsics functions within source program are capable of being incorporated into an intermediate code or a target machine language.

Additionally, the claimed compiling system performs two phase definition and syntax analyzing processing. The two phase definition is for the definition of the intrinsics function such as identifier name of the intrinsics function and its kind of operand. The syntax analyzing processing is for the instruction attribute information such as instruction length (e.g. 2byte), the specification of the resource (e.g. a register) and distinction of co-processor instruction/ core processor instruction by a pre-processing instruction. Thus, a user is freely capable of adding the variety types and the detail of the attribute information characterizing an instruction coded in the intrinsics functions.

Thus, Claim 1 recites, in part,

> an intrinsics function information database into which a definition of an intrinsics function and an instruction attribute

> information characterizing an instruction coded in intrinsics
> function are stored as intrinsics function information;
>   a syntax analyzer configured to analyze syntax of said
> tokens, to judge as to whether or not a definition of an
> intrinsics function is included in a combination of said tokens,
> to find a reserved pre-processing instruction in the combination
> of said token and, if found, to add said instruction attribute
> information of said intrinsics function described in said pre-
> processing instruction to the definition of the intrinsics function
> in said database

Independent Claims 4, 7-9, 12, 14, 16, 17, 19 and 20 recite similar features.

Caron describes a compiler fro generating object code from an input source program, a character string interpreter, and a syntax analyzer which analyzes syntax of the tokens. However, as noted in the outstanding Office Action Caron does not describe a definition of an intrinsics function and an instruction attribute information characterizing an instruction coded in intrinsics function are stored as intrinsics function information.[3]

The outstanding Office Action relies on Santhanam as curing the above noted deficiency found in Caron.

Santhanam describes an intrinsics function information database into which a definition of the intrinsics function and the instruction attribute information are stored as intrinsics function information, a code generator which develops an instruction that calls a intrinsics function within said source program by referring to the intrinsics function information and the syntax analyzer determining whether or not a definition of an intrinsics function and an instruction attribute information is included in the tokens.

However, Santhanam does not describe or suggest "an intrinsics function information database into which a definition of an intrinsics function and an instruction attribute information characterizing an instruction coded in intrinsics function are stored as intrinsics function information."

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[3] See Office Action of 6/25/2004 as referenced in the outstanding Office Action.

In other words, <u>Santhanam</u> only discloses a one phase definition and syntax analyzing

processing where the instruction attribute information is described in the same code line as

the definition of the intrinsics function and its operand.[4] Thus, <u>Santhanam</u> does not disclose

or suggest two phase definition and syntax analyzing processing as described in the

independent claims.

Accordingly, Applicants respectfully submit independent Claim 1 and similarly

independent Claims 7-9, 12, 14, 16, 17, 19 and 20 patentably distinguish over <u>Santhanam</u>.

Thus, Applicants respectfully submit that independent Claims 1, 7-9, 12, 14, 16, 17,

19 and 20 and claims depending therefrom, patentably distinguish over <u>Caron</u> and <u>Santhanam</u>

considered alone or together in any proper combination.

Consequently, in light of the above discussion and in view of the present amendment,

the present application is believed to be in condition for allowance and an early and favorable

action to that effect is respectfully requested.

Respectfully submitted,

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[4] <u>Santhanam</u>, Col. 3, lines 9-62.

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